

Virginia Grade Level Alternative Worksheet

Grade 5 Science

Check all that apply:

Assigned scores have been entered into the online VGLA System.

Assigned scores have been verified and submitted for final scoring in the online VGLA System.

Student's Name: _____ Student's Number: _____

An "X" under No Evidence represents
a Total of 0.

Reporting Category	SOL #	Specific Virginia Standard of Learning	Demonstrated (0 to 4)	Inferred (0 to 4)	No Evidence (0)	Total (0 to 4)
RC 1	4.1	The student will plan and conduct investigations in which a) distinctions are made among observations, conclusions (inferences), and predictions; b) data are classified to create frequency distributions; c) appropriate metric measures are used to collect, record, and report data; d) appropriate instruments are selected to measure linear distance, volume, mass, and temperature; e) predictions are made based on data from picture graphs, bar graphs, and basic line graphs; f) hypotheses are formulated based on cause and effect relationships; g) variables that must be held constant in an experimental situation are defined; and h) numerical data that are contradictory or unusual in experimental results are recognized.				
RC 1	5.1	The student will plan and conduct investigations in which a) appropriate instruments are selected and used for making quantitative observations of length, mass, volume, and elapsed time; b) rocks, minerals, and organisms are identified using a classification key; c) data are collected, recorded, and reported using the appropriate graphical representation (graphs, charts, diagrams); d) accurate measurements are made using basic tools (thermometer, meter stick, balance, graduated cylinder); e) predictions are made using patterns, and simple graphical data are extrapolated; and f) estimations of length, mass, and volume are made.				
RC 2	4.2	The student will investigate and understand that energy is needed to do work and that machines make work easier. Key concepts include a) energy forms (electrical, mechanical, and chemical energy); b) potential and kinetic energy; c) simple and complex machines; and d) efficiency, friction, and inertia.				
RC 2	4.3	The student will investigate and understand the characteristics of electricity. Key concepts include a) the nature of electricity (voltage, ampere, resistance, conductors, and insulators); b) circuits (open/closed, parallel/series); c) magnetism and magnetic fields; d) static electricity ; and e) historical contributions in understanding electricity.				

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RC 2	5.2	The student will investigate and understand how sound is transmitted and is used as a means of communication. Key concepts include a) frequency, waves, wavelength, resonance, vibration; b) the ability of different media (solids, liquids, gases) to transmit sound; and c) communication tools (voice, Morse code, sonar, animal sounds, musical instruments).				
RC 2	5.3	The student will investigate and understand basic characteristics of white light . Key concepts include a) the visible spectrum, light waves, reflection, refraction, diffraction, opaque, transparent, translucent; b) optical tools (eyeglasses, lenses, flashlight, camera, kaleidoscope, binoculars, microscope, light boxes, telescope, prism, spectroscope, mirrors); and c) historical contributions in understanding light.				
RC 2	5.4	The student will investigate and understand that matter is anything that has mass; takes up space; and occurs as a solid, liquid, or gas. Key concepts include a) atoms, molecules, elements, and compounds; b) mixtures and solutions; and c) effect of temperature on the states of matter.				
RC 3	4.4	The student will investigate and understand basic plant anatomy and life processes. Key concepts include a) the structures of typical plants (leaves, stems, roots, and flowers); b) processes and structures involved with reproduction (pollination, stamen, pistil, sepal, embryo, spore, and seed); c) photosynthesis (chlorophyll, carbon dioxide); and d) dormancy.				
RC 3	4.5	The student will investigate and understand how plants and animals in an ecosystem interact with one another and the nonliving environment. Key concepts include a) behavioral and structural adaptations; b) organization of communities; c) flow of energy through food webs; d) habitats and niches; e) life cycles; and f) influence of human activity on ecosystems.				
RC 3	4.8	The student will investigate and understand important Virginia natural resources. Key concepts include a) animals and plants, both domesticated and wild.				
RC 3	5.5	The student will investigate and understand that organisms are made of cells and have distinguishing characteristics. Key concepts include a) parts of a cell; b) five kingdoms of living things; c) vascular and nonvascular plants; and d) vertebrates and invertebrates.				

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RC 4	4.6	The student will investigate and understand how weather conditions and phenomena occur and can be predicted. Key concepts include a) weather factors (temperature, air pressure, fronts, formation and type of clouds, and storms); and b) meteorological tools (barometer, hygrometer, anemometer, rain gauge, and thermometer).				
RC 4	4.7	The student will investigate and understand the relationships among the Earth, moon, and sun. Key concepts include a) the motions of the Earth, moon, and sun (revolution and rotation); b) the causes for the Earth's seasons and phases of the moon; c) the relative size, position, and makeup of the Earth, moon, and sun; d) unique properties of the Earth as a planet and as part of the solar system; and e) historical contributions in understanding the Earth-moon-sun system.				
RC 4	4.8	The student will investigate and understand important Virginia natural resources. Key concepts include a) watershed and water resources; c) minerals, rocks, ores, and energy sources; and d) forests, soil, and land.				
RC 4	5.6	The student will investigate and understand characteristics of the ocean environment. Key concepts include a) geological characteristics (continental shelf, slope, rise); b) physical characteristics (depth, salinity, major currents); c) biological characteristics (ecosystems); and d) public policy decisions related to the ocean environment (assessment of marine organism populations, pollution prevention).				
RC 4	5.7	The student will investigate and understand how the Earth's surface is constantly changing. Key concepts include a) the rock cycle, including the identification of rock types; b) Earth history and fossil evidence; c) the basic structure of the Earth's interior; d) plate tectonics (earthquakes and volcanoes); e) weathering and erosion; and f) human impact.				

Reporting Category Key

RC 1 Scientific Investigation

RC 2 Force, Motion, Energy, and Matter

RC 3 Life Processes and Living Systems

RC 4 Earth/Space Systems and Cycle